

Training and Evaluation Outline Report

Status: Approved

12 Nov 2014

Effective Date: 17 Oct 2016

Task Number: 05-PLT-5502

Task Title: Perform Underwater Demolitions Operations

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the Fort Leonard Wood, MO foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	ATP 5-19 (Change 001 09/08/2014 78 Pages)	RISK MANAGEMENT http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf	Yes	No
	SS521-AG-PRO-010	U.S. Navy Diving Manual. Revision 6	Yes	No
	TM 3-34.82	Explosives and Demolitions	Yes	No
	TM 3-34.83	ENGINEER DIVING OPERATIONS	Yes	Yes
	TM 3-34.85	ENGINEER FIELD DATA {MCRP 3-17A} https://armypubs.us.army.mil/doctrine/DR_pubs/dr_b/pdf/tm3_34x85.pdf	Yes	No

Conditions: The element receives an Operation Order (OPORD), directing an underwater demolitions operation in support of current operations. The OPORD details required results, tidal information (current and wave conditions), expected weather conditions (ceiling height), the location of structures that may be affected by the blast (topside and bottom), the location and density of watercraft traffic, the amount of time available to perform the mission (window to blast), permission as required, and the notice to mariners. A surface support vessel, explosives, and all assigned personnel and equipment are available. The current is 2.5 knots or less.

Note: The Commander must still determine at what level of training they would want the element to perform. Crawl, walk or run. This can only be determined after consideration as to the units training level.

The Commander prior to evaluating an element in the conduct of the task must determine if it will be conducted in a Live, Virtual, or Constructive environment, additionally it must also be determined which condition as described below that the element will conduct the task. The selection made for this task is at a trained level of proficiency. The commander must determine which of the environments below will best suit the unit and the proficiency level at which the unit is. When conducting crawl or walk level training units should not increase the intensity until the unit has achieved the standards and then unit trainers should include variables that increase proficiency in all conditions.

Note: The condition statement for this task is written assuming the highest training conditions reflected on the Task Proficiency matrix required for the evaluated unit to receive a "fully trained" (T) rating.

Note: Condition terms definitions:

Dynamic Operational Environment: Three or more operational and two or more mission variables change during the execution of the assessed task. Operational variables and threat Tactics, Techniques, and Procedures (TTPs) for assigned counter-tasks change in response to the execution of Blue Forces (BLUFOR) tasks.

Complex Operational Environment: Changes to four or more operational variables impact the chosen friendly COA/mission. Brigade and higher units require all eight operational variables of Political, Military, Economic, Social, Infrastructure, Information, Physical environment, and Time (PMESII-PT) to be replicated in varying degrees based on the task being trained.

Single threat: Regular, irregular, criminal or terrorist forces are present.

Hybrid threat: Diverse and dynamic combination of regular forces, irregular forces, and/or criminal elements all unified to achieve mutually benefiting effects.

This task should not be trained in MOPP 4.

Standards: The element calculates and employs demolitions to achieve objectives outlined in the OPORD by using the minimum amount of explosives, while preventing damage to friendly troops and equipment.

Note: Leaders are defined as the Commander, Executive Officer, First Sergeant, Operations Sergeant, Platoon Leaders, Platoon Sergeants, Squad Leaders, and Team Leaders.

Live Fire Required: No

Objective Task Evaluation Criteria Matrix:

Plan and Prepare			Execute						Assess	
Operational Environment			Training Environment (LV/C)	Training/Authorized % of Leaders Present at	% of Soldiers Present at	External Eval	% Performance Measures 'Go'	% Critical Performance Measures 'Go'	% Leader Performance Measures 'Go'	Task Assessment
SQD & PLT										
Dynamic (Single Threat)	Day	IAW unit CATS statement.		>=85%	>=80%	Yes	>=91%	All	>=90%	T
Static (Single Threat)				75-84%			80-90%		80-89%	T-
				65-74%	75-79%	65-79%	P			
				60-64%	60-74%	No	51-64%	<All	<=79%	P-
				<=59%	<=59%		<=50%			U

Remarks: None

Notes: All required references and technical manuals will be provided by the local command.

Safety Risk: Extremely High

Task Statements

Cue: None

DANGER

Leaders have an inherent responsibility to conduct Risk Management to ensure the safety of all Soldiers and promote mission accomplishment.

WARNING

Risk management is the Army's primary decision-making process to identify hazards, reduce risk, and prevent both accidental and tactical loss. All Soldiers have the responsibility to learn and understand the risks associated with this task.

CAUTION

Identifying hazards and controlling risks across the full spectrum of Army functions, operations and activities is the responsibility of all Soldiers.

Performance Steps and Measures

NOTE: Assess task proficiency using the task evaluation criteria matrix.

NOTE: Asterisks (*) indicate leader steps; plus signs (+) indicate critical steps.

STEP/MEASURE	GO	NO-GO	N/A
+* 1. The diving supervisor plans demolition operations based on requirements in the OPORD.			
+ 2. The dive element surveys the demolition objective to verify critical dimensions.			
3. The dive element reports the findings of the survey.			
+* 4. The diving supervisor supervises the construction of the charges, firing system and initiating system.			
+ a. Selects explosives based on effectiveness and practicality for underwater demolitions operations.			
+ b. Calculates the charge size, location and number of explosives.			
+ 5. The diving team emplaces the underwater demolitions.			
+ a. Blasts against strengths, not weaknesses.			
b. Uses internal charges (snakeholing or blockholing) where required.			
+ c. Observes safety precautions when placing explosives.			
Note: Do not use a time fuse underwater, and maintain a safe distance for personnel and equipment.			
+ d. Uses strain relief methods, when required (in small to large swells or if there is a possibility of the Modernized Demolition Initiators [MDI] cord being pulled off the charge).			
+ e. The lead diver inspects the entire demolition system prior to exiting the water.			
* 6. The dive supervisor initiates the blast.			
7. The dive team performs an inspection dive to ensure all requirements of the underwater demolitions operation have been met.			
* 8. The dive supervisor reports the results to Higher Headquarters (HQ) In Accordance With (IAW) the unit Standing Operating Procedure (SOP).			

TASK PERFORMANCE / EVALUATION SUMMARY BLOCK							
ITERATION	1	2	3	4	5	M	TOTAL
TOTAL PERFORMANCE MEASURES EVALUATED							
TOTAL PERFORMANCE MEASURES GO							
TRAINING STATUS GO/NO-GO							

ITERATION: 1 2 3 4 5 M

COMMANDER/LEADER ASSESSMENT: T P U

Mission(s) supported: None

MOPP 4: Never

MOPP 4 Statement: None

NVG: Never

NVG Statement: None

Prerequisite Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
	05-PLT-3006	Establish Work Site Security for a General Engineering Mission	05 - Engineers (Collective)	Approved

Supporting Collective Task(s):

Step Number	Task Number	Title	Proponent	Status
2.	05-PLT-5509	Perform Self-Contained Underwater Breathing Apparatus (Scuba) Operations	05 - Engineers (Collective)	Approved
2.	71-CO-5100	Conduct Troop Leading Procedures for Companies	71 - Combined Arms (Collective)	Approved
6.	05-PLT-5511	Clear Underwater Obstacles	05 - Engineers (Collective)	Approved
6.	05-TM-5529	Breach Underwater Minefields	05 - Engineers (Collective)	Approved
8.	05-CO-0018	Conduct Report Procedures	05 - Engineers (Collective)	Approved

OPFOR Task(s):

Task Number	Title	Status
71-2-9010	OPFOR Disrupt (Company and below)	Approved

Supporting Individual Task(s):

Step Number	Task Number	Title	Proponent	Status
	052-12D-1668	Prime Explosives for Use Underwater	052 - Engineer (Individual)	Approved
	052-12D-1669	Employ Explosives Underwater	052 - Engineer (Individual)	Approved
	052-12D-1701	Rescue a Diving Casualty Underwater	052 - Engineer (Individual)	Approved
	052-12D-2524	Direct the Employment of Explosives Underwater	052 - Engineer (Individual)	Approved
	052-12D-3464	Supervise an Underwater Demolition Operation	052 - Engineer (Individual)	Approved
	052-193-3022	Calculate Timber-Cutting Charges	052 - Engineer (Individual)	Approved
	052-193-3023	Calculate Steel-Cutting Charges	052 - Engineer (Individual)	Approved
	052-193-3024	Calculate Breaching Charges	052 - Engineer (Individual)	Approved
	052-193-3040	Employ Bridge Demolitions	052 - Engineer (Individual)	Approved
	052-193-4040	Manage Engineer Demolition Missions	052 - Engineer (Individual)	Approved
	052-238-1500	Prepare an Explosive for Underwater Placement	052 - Engineer (Individual)	Approved
	052-238-1501	Construct a Double, Waterproof Firing Assembly (DWFA)	052 - Engineer (Individual)	Approved
	052-238-1603	Place Underwater Excavation Charges	052 - Engineer (Individual)	Approved
	052-238-1604	Place a Propeller Removal Charge	052 - Engineer (Individual)	Approved
	052-238-1626	Perform Underwater Weight-Handling Techniques	052 - Engineer (Individual)	Approved
	052-238-1639	Chart a Dive	052 - Engineer (Individual)	Approved
	052-238-1640	Operate a Diving Console	052 - Engineer (Individual)	Approved
	052-238-1641	Operate a Small Boat	052 - Engineer (Individual)	Approved
	052-238-1645	Charge an Air System	052 - Engineer (Individual)	Approved
	052-238-2511	Direct the Setup of a Scuba Station	052 - Engineer (Individual)	Approved
	052-238-2512	Direct the Setup of a Surface-Supplied Dive Station	052 - Engineer (Individual)	Approved
	052-238-3400	Calculate Underwater Excavation Charges	052 - Engineer (Individual)	Approved
	052-238-3401	Direct an Underwater Demolition Operation	052 - Engineer (Individual)	Approved
	052-238-3412	Select a Decompression Method	052 - Engineer (Individual)	Approved
	052-238-3416	Calculate Breathing Gas Requirements to Support Diving Operations	052 - Engineer (Individual)	Approved
	052-238-4501	Coordinate Unit Underwater Minefield Operations	052 - Engineer (Individual)	Approved
	052-238-4508	Prepare a Diving-Mission Operation Order (OPORD)	052 - Engineer (Individual)	Approved
	052-238-4511	Supervise High-Risk Diving Operations	052 - Engineer (Individual)	Approved
	052-238-4517	Coordinate Underwater Demolition Operations	052 - Engineer (Individual)	Approved

Supporting Drill(s): None

Supported AUTL/UJTL Task(s):

Task ID	Title
ART 1.6.4	Provide Diver Support

TADSS

TADSS ID	Title	Product Type	Quantity
No TADSS specified			

Equipment (LIN)

LIN	Nomenclature	Qty
D32859	DIV EQ ST DIV SUP A	1
D49154	DIV EQ ST IND SWMMR	1
D32723	DIV EQ ST OPEN CIR	1
D32927	DIV EQ ST DIV SUP B	1
92018N	Cylinder Scuba Tanks, 3500 Psi 80-102 Cu Ft	1

Materiel Items (NSN)

NSN	LIN	Title	Qty
1375-00-728-5941	D92154	Charge, Demolition, Block PETN 2 LB: M118 (DODIC:M024)	1
1375-00-965-0800	F15260	Cord, Detonating, 6000 Foot Box (DODIC:M456)	1

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card. .

Safety: In a training environment, leaders must perform a risk assessment in accordance with ATP 5-19, Risk Management. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. .